

REMARKS

Claims 1-42 are currently pending in the subject application and are presently under consideration. Claims 1, 17, 35, and 39 have been amended as shown on pp. 2-8 of the Reply. Claim 43 is canceled. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-11, 14-40, Under 35 U.S.C. §103(a)

Claims 1-11, 14-40, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Coburn *et al.* (US 2002/0120921) in view of Linden *et al.* (US 5,551,030), in further view of Deffler (US 2005/0119871). Withdrawal of this rejection is respectfully requested for at least the following reasons. Coburn *et al.*, either alone or in combination with Linden *et al.* and Deffler, does not teach or suggest all the claimed aspects of the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) ***must teach or suggest all the claim limitations.*** See MPEP §706.02(j) (emphasis added). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant's invention relates to a system and methodology that facilitates automatic generation of control code that utilizes function objects within Human-Machine Interfaces (HMI). The subject matter as claimed thus enables an industrial system or process operator, not skilled in computer programming but familiar with the industrial system or process, to customize control code necessary for industrial automation. An artificial intelligence component further simplifies the process by interrogating a processing device and/or arrange generated HMI object(s) to represent a system and/or process. The inventive system can also utilize artificial intelligence techniques to generate an arrangement of HMI objects based on operator state and

context. To this end, amended independent claim 1 (and similarly independent claims 17, 35, and 39) recites ***an artificial intelligence component that generates an arrangement of the HMI objects based upon at least one of user characteristics, context, or prior arrangements made by the user.*** Coburn *et al.*, either alone or in combination with Linden *et al.* and Deffler, does not disclose or suggest these exemplary features of the claimed subject matter.

Coburn *et al.* relates generally to system software for managing the design, simulation, implementation, and maintenance of a manufacturing process. The cited document, however, does not disclose an artificial intelligence component. The cited document discloses a HMI editor (*See* paragraph [0390]), and the use of templates (*See* paragraph [0092]). However, the document does not disclose using an artificial intelligence component that facilitates generating an arrangement of HMI objects based on user characteristics, context, or prior arrangements, as recited in the subject claims.

Linden *et al.* generally relates to the field of processor operation and management. More specifically, the invention relates to communication between different types of application programs and user interfaces with application programs. A user can “drag and drop” one window onto another, and the system may coordinate the different parameters of the windows to allow the combination to function. The document discloses inferring properties of one of these windows (*See* col. 4, ll. 55-60). However, there is no mention of an artificial intelligence component that generates arrangements of HMI objects based upon user characteristics, context, or prior user patterns, as does the claimed invention. Moreover, applicant’s claimed system relies on extrinsic data to generate an HMI arrangement, whereas Linden *et al.* is limited to intrinsic data – one of the two windows being “dragged and dropped.” Thus, Linden *et al.* teaches away from applicant’s claimed system, and therefore the claimed system would not have been obvious to a person having ordinary skill in the art.

Examiner states that Coburn *et al.* and Linden *et al.* do not disclose a historical component, and offers Deffler to cure this deficiency. However, Deffler does not remedy the aforementioned deficiencies with respect to Coburn *et al.* and Linden *et al.* In particular, Deffler does not disclose an artificial intelligence component.

In view of the foregoing, it is readily apparent that Coburn *et al.*, either alone or in combination with Linden *et al.* and Deffler, does not disclose all claim aspects. Accordingly,

withdrawal of the rejection of independent claims 1, 17, 35, and 39, and associated dependent claims is respectfully requested.

II. Rejection of Claims 12, 13, 41, and 42 Under 35 U.S.C. §103(a)

Claims 12, 13, 41, and 42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Coburn *et al.* in view of Linden *et al.* in further view of Deffler, in further view of Polz *et al.* (US 2004/0260518). Withdrawal of this rejection is requested for at least the following reason. Claims 12, 13, 41, and 42 depend from independent claims 1 and 39 respectively, and Polz *et al.* does not make up for the aforementioned deficiencies of Coburn *et al.*, Linden *et al.*, and Deffler with respect to claims 1 and 39. Thus, the rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [ALBRP315US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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